

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Present Application:

Applicant : Lars Björck, Lund, Sweden and
Magnus Rassmussen, Lund, Sweden
Title : PROTEIN
Docket No. : 100084.415US
Date : May 1, 2001

Prior Application:

International Application No. PCT/GB99/03631
Filed: November 2, 1999

Box Patent Application
Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Commissioner for Patents:

Please amend the above-identified application as follows:

In the Specification:

Amend the title as follows:

STREPTOCOCCAL ALPHA ZM BINDING PROTEIN

Amend the specification by inserting a new section before the "Field of the Invention" as follows:

-- CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation under 35 U.S.C. § 111(a) of International Patent Application No. PCT/GB99/03631 filed November 2, 1999, now pending, which application claims the benefit of United Kingdom Patent Application No. 9823975.9 filed November 2, 1998, which applications are incorporated by reference herein in their entirety.--

In the Claims:

Please cancel claim 19.

Please amend claims 3, 4, 5, 8, 9, 10, 13, 17, 21 to read as follows:

3. (Amended) A protein according to claim 1 further comprising one or more tandem repeats having the amino acid sequence of SEQ ID NO:3 or a variant thereof.

4. (Amended) A protein according to claim 1 further comprising a cell membrane anchor region together with a hydrophobic transmembrane region.

5. (Amended) A protein according to claim 1 consisting of the amino acid sequence of any of SEQ ID NOS:1 to 11 or a variant thereof.

8. (Amended) A peptide according to claim 6 which is capable of generating an immune response against group A streptococcus.

9. (Amended) A peptide according to claim 6 which binds α_2M .

10. (Amended) A peptide according to claim 6 comprising the acid sequence of SEQ ID NO:3 or a variant of the said sequence.

13. (Amended) A DNA sequence which codes for a protein or peptide according to claim 1, said DNA sequence being selected from:

- (a) the DNA sequence of any of SEQ ID NOS:12 to 16 or the complementary strands thereof;
- (b) DNA sequences which selectively hybridize the DNA sequences defined in (a) or fragments thereof; and
- (c) DNA sequences which, but for the degeneracy of the genetic code, would hybridize to the DNA sequences defined in (a) or (b) and which sequences code for a protein or peptide having the same amino acid sequence.

17. (Amended) A process of producing a protein or peptide according to claim 1, comprising culturing a host cell as defined in claim 15 under conditions to provide for expression of the desired protein or peptide.

21. (Amended) An antibody capable of binding to a peptide or protein according to claim 1.

REMARKS

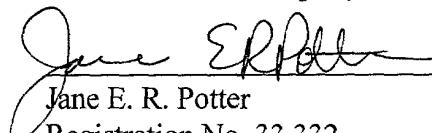
Applicants respectfully request consideration of the application based on the above amendments and the following remarks. Claims 1-18 and 20-22 are now pending in this application. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

On the basis of the above amendment and remarks, consideration of the application and its allowance are respectfully requested. Should the Examiner have any addition questions, he is respectfully encouraged to contact the undersigned attorney at (206) 622-4900.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



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WPN: 100084\415US\Continuation Application\Preliminary Amendment

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PATENT TRADEMARK OFFICE

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

The title has been changed as follows:

STREPTOCOCCAL ALPHA ZM BINDING PROTEIN

The following paragraph was added:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation under 35 U.S.C. § 111(a) of International Patent Application No. PCT/GB99/03631 filed November 2, 1999, now pending, which application claims the benefit of United Kingdom Patent Application No. 9823975.9 filed November 2, 1998, which applications are incorporated by reference herein in their entirety.

In the claims:

Claim 19 has been cancelled.

Claims 3, 4, 5, 8, 9, 10, 13, 17, and 21 are amended as follows:

8. A protein according to claim 1 [or claim 2] further comprising one or more tandem repeats having the amino acid sequence of SEQ ID NO:3 or a variant thereof.
8. A protein according to [any one of] claim[s] 1[, 2 or 3] further comprising a cell membrane anchor region together with a hydrophobic transmembrane region.
8. A protein according to [any preceding] claim 1 consisting of the amino acid sequence of any of SEQ ID NOS:1 to 11 or a variant thereof.

8. A peptide according to claim 6 [or 7] which is capable of generating an immune response against group A streptococcus.

9. A peptide according to claim 6 [or 7] which binds α_2 M.

10. A peptide according to claim 6 [or 7] comprising the acid sequence of SEQ ID NO:3 or a variant of the said sequence.

13. A DNA sequence which codes for a protein or peptide according to [any preceding] claim 1, said DNA sequence being selected from:

- (a) the DNA sequence of any of SEQ ID NOS:12 to 16 or the complementary strands thereof;
- (b) DNA sequences which selectively hybridize the DNA sequences defined in (a) or fragments thereof; and
- (c) DNA sequences which, but for the degeneracy of the genetic code, would hybridize to the DNA sequences defined in (a) or (b) and which sequences code for a protein or peptide having the same amino acid sequence.

17. A process of producing a protein or peptide according to [any of] claim[s] 1 [to 12], comprising culturing a host cell as defined in claim 15 [or 16] under conditions to provide for expression of the desired protein or peptide.

21. An antibody capable of binding to a peptide or protein according to [any one of] claim[s] 1 [to 12].